

**ABSTRACT**

An adaptive cruise control system includes a forward-looking sensor generating a range signal corresponding to a distance between the host vehicle and a target vehicle. The forward-looking sensor also generates a range rate signal corresponding to a rate that the distance between the host vehicle and the target vehicle is changing. A controller is electrically coupled to the forward-looking sensor.

10 The controller maintains a preset headway distance between the host vehicle and the target vehicle by adjusting the host vehicle velocity in response to the range signal and the range rate signal. The host vehicle may come to a full stop when the target

15 vehicle is acquired below a predetermined velocity. If the target vehicle is acquired above the predetermined velocity, then a warning is given when braking is required.

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